

## Attachment 2

### **Background on the Yucca Mt. Draft EIS And Potential Impacts in California**

Potential Environmental Impacts: In 1988-1989, the Energy Commission coordinated an interagency working group that commented on the federal Department of Energy's (DOE) Site Characterization Plan for Yucca Mountain. The Site Characterization Plan identified studies necessary to determine the suitability of the Yucca Mountain site for a long-term, geologic repository. In 1989, the California High-Level Nuclear Waste Interagency Working Group provided comments on DOE's Site Characterization Plan regarding its adequacy for evaluating potential impacts in California. The California agencies participating in this review included the State Water Resources Control Board, the California Department of Fish and Game, the California Department of Conservation's Division of Mines and Geology, the California Department of Water Resources, the California Parks and Recreation, and the California Energy Commission.

This California interagency working group concluded that the most important geologic issue relevant to California from the proposed Yucca Mountain project is potential groundwater contamination in the Death Valley regional groundwater basin resulting from an accidental radionuclide release at the site. The potential for migration of radionuclide contaminants into eastern California aquifers (i.e., into the Death Valley regional groundwater basin) is of concern as are potential impacts on water supplies for California fish and wildlife populations in and near the Death Valley National Park.

Inyo County testified early November 1999 in hearings on the DEIS regarding their concern about the long-term threat the Yucca Mountain repository poses to regional groundwater supplies and to communities east of Owens Valley. They noted that hydrologic studies conducted by Inyo, Nye and Esmeralda Counties point to the existence of a continuous aquifer running from beneath Yucca Mountain southwards to Tecopa, Shoshone and Death Valley Junction. These studies indicated that water flowing beneath Yucca Mountain flows southeast to become surface water flowing into Death Valley that is used for commercial and domestic purposes and supports natural habitats. Inyo County criticized the DEIS for not addressing or acknowledging these studies regarding potential pathways for contaminants to reach the Death Valley region.

Further, Inyo County noted that the repository design changed from a "hot" repository to a "cool" repository, which has major and "insufficiently researched implications for groundwater flow and groundwater chemistry". The Draft EIS was issued prior to the adoption of the cool design and does not include information to allow reviewers to evaluate the implications of this design change.

Inyo County further recommended that the repository be kept open, ventilated and monitored to drive out heat and moisture and to allow flexibility in mitigating impacts from the repository to safeguard the residents and users of Amargosa Valley and Death Valley.

Potential Transportation Impacts: There will be significant transportation impacts in California from the proposed repository. The Inyo County Board of Supervisors testified that Inyo's primary concern with the DEIS is its superficial analysis of transportation impacts involving the movement of 77,000 or more tons of radioactive waste to Yucca Mountain

Regarding risks to humans, the risks associated with transportation pose the greatest risk to populations along the routes. In order to evaluate transportation impacts in California, the DEIS should provide detailed information on likely primary and secondary routes in California, numbers of shipments, and potential radiological and nonradiological impacts from these shipments.

California State Route 127 is being used for shipments of low-level nuclear waste to the Nevada Test Site (NTS), and DOE is proposing its use for additional low-level shipments from eastern states to NTS (over 800 shipments annually). SR 127 is also being proposed as a route for transuranic waste shipments from NTS to the Waste Isolation Pilot Plant in New Mexico. Inyo County has expressed concern that highway and rail routes in southeastern California may be likely candidates for eventual shipments of spent nuclear fuel.

An estimated 74,000 truck shipments (3/4 of the total shipments) of spent fuel and high-level nuclear waste could be transported to Yucca Mountain through California under DOE's "mostly truck" scenario, an average of five truck shipments daily for 39 years. Under a truck/rail scenario, an estimated 26,000 truck shipments and more than 9,800 rail shipments could be transported through California to the Yucca site.

Inyo County noted the necessary roadway improvements and the cost to the County and State of equipping and staffing emergency response stations to prepare for shipments. The County further noted that SR 127 is isolated and most of the route is 1-3 hours from any emergency response assistance. The nearest hospital facilities are in Las Vegas. As a result, the County has a strong preference for rail shipment of this waste, including offloading most of the waste in Nevada east of the Yucca Mountain site.

California agencies need to review the relevant comments on the Draft EIS regarding potential impacts in California from the proposed repository. At a minimum, the agencies that provided comments in 1989 on DOE's Site Characterization Plan should review their comments in light of the conclusions and findings of the Draft EIS for the Yucca Mountain project.